Printing dictionaries

Printing a dictionary frustrates many linguists and anthropologists. Converting lexical databases to formatted documents has been so difficult that—for some—it never gets done before editing is completed. The Multi-Dictionary Formatter enables ordinary computer users to print a dictionary. Removing the difficulty from printing saves time; adding the ability to inspect fully formatted lexical entries throughout the dictionary-making process improves quality.

Overview

The Multi-Dictionary Formatter—abbreviated MDF—has been developed by field linguists to enable you to print lexical data in the form of a dictionary or reversed index (finderlist). There is now a version of MDF in Shoebox that exports a lexical database file as a document in Rich Text Format, which you can print using Microsoft Word.[1] MDF does not modify your database file.

The field guide *Making Dictionaries* is a companion to the MDF computer program.[2] A practical academic manual on lexicography, it includes principles for determining multiple senses, choosing good example sentences, and mapping a culture's networks of meaning. A computer software manual, it includes about 200 real-language examples illustrating how to organize multilingual data (especially for those who build a lexicon primarily by interlinearizing a corpus of natural texts).

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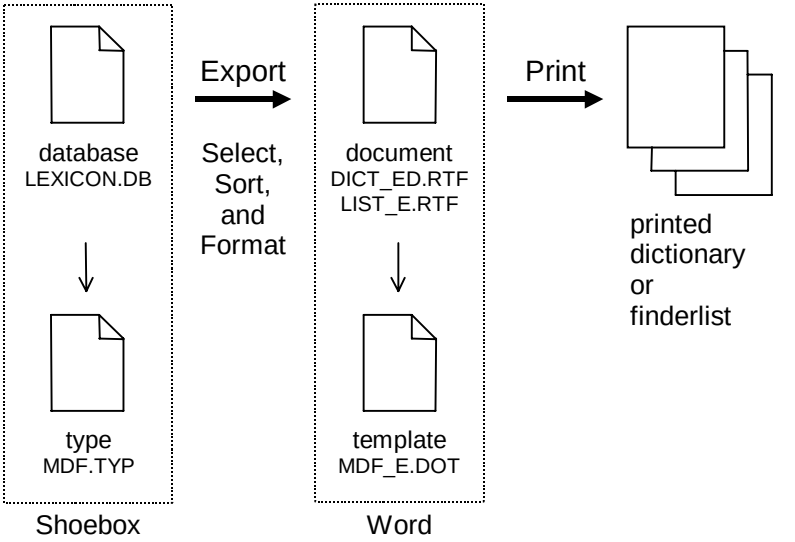
[1] Since MDF uses Word's document template and character style features, it requires version 6 or later. It works on both Windows and Macintosh.

[2] David F. Coward and Charles E. Grimes. 1995. *Making Dictionaries: A guide to lexicography and the Multi-Dictionary Formatter.* Waxhaw: Summer Institute of Linguistics. (Available from: JAARS, ICTS, Box 248, Waxhaw, NC 28173)

MDF is flexible enough to organize lexical data from all over the world for a variety of purposes and print it in several formats. To gain these benefits, you must use its set of data markers. But please note that **Shoebox does *not* require you to use MDF**. If you already have a well-organized set of markers for lexical data, you can continue to use them by defining a new database type.

This chapter supercedes chapters 1 and 3 of *Making Dictionaries*, which explain how to use the original MDF program for DOS. Chapter 2 is superceded by the file MDF-CH2.DOC. Entitled "Getting started in lexicography using MDF and Shoebox 4," it explains the data markers and illustrates their use with examples of database records and the corresponding formatted dictionary entries. This is the basic information you need to convert an existing database's markers to the MDF system. For on-line help, open the database file MDFIELDS.DB in Shoebox. (It's found in the MDF folder.) If you're upgrading from a previous version of MDF in Shoebox, please read the MDFNOTES.TXT file too.

Formatting lexical data consists of two main steps: exporting the database from Shoebox and printing the exported document using Microsoft Word. Here's a diagram of the formatting process:



Formatting a sample

To see what MDF does, you can format the MDFSAMPL.DB database file as a Selaru — English Dictionary.[3] To do this:

- ☐ From the Shoebox Program Group (Start–Programs–Shoebox in Windows 95) open the **MDF Sample Project**.

Or, if for some reason this shortcut was not created by the Shoebox installation package, do the following:[4]

- ☐ Start Shoebox (or switch to it, if it's already running).
- ☐ Choose Project, Open.
- ☐ Select the MDFSAMPL.PRJ project file in the My Shoebox Settings folder (MYSHSET in Windows 3.1).[5]
- ☐ Choose Open (in Windows 3.1, choose OK).

(If MDFSAMPL.DB does not automatically open, Shoebox will tell you it can't find the file. After you choose OK, Shoebox will show you a File Open dialog box. In this case, navigate to the MDFSAMPL folder under the MDF folder and choose Open. MDFIELDS.DB is in the MDF folder itself. This should enable Shoebox to open the files.)

In Shoebox, the fields in MDFSAMPL.DB have a close approximation to the character formatting of the printed document. MDF's conventions include bold vernacular language text, italic national language text, and the lexeme (headword) larger than other fields. Since you define marker font properties for the data fields (in Shoebox) separately from style formatting attributes for the corresponding text elements (in Word), you can select the best visual appearance for the computer screen and for the printed page, without any need to compromise.

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[3] Selaru is spoken in the province of Maluku in eastern Indonesia. This is unpublished data collected by David and Naomi Coward.

[4] See the MDFNOTES.TXT file for information on how to create this shortcut.

[5] This is the folder that the Shoebox setup program makes for you to put language encodings and database types. You may have selected a different name or location for this folder on your computer system.

Exporting The first step is exporting the database as a document.

- ☐ Choose File, Export.
- ☐ Select the *Multi-Dictionary Formatter* export process.
- ☐ Check *Automatically open document in word processor* (if Microsoft Word, version 6 or later, is on your computer).
- ☐ Choose OK.

In the *Multi-Dictionary Formatter* dialog box you select the exported document's format.

- ☐ Select *Audience: English* and *Format: Diglot dictionary*.
- ☐ Choose OK.

In the *Exported File* dialog box you select the exported document's file name (the default for an English diglot dictionary is DICT_ED.RTF).

- ☐ Choose Save (in Windows 3.1, choose OK).[6]

If you have the status bar showing in Shoebox, you will see on the progress indicator that MDF is selecting, sorting, formatting, and exporting your lexical data. The *MDF Reminder* dialog box tells you about a menu item you must choose in Microsoft Word to complete the formatting process. (This step is described below.)

- ☐ Choose OK.

Printing The second step is printing the document. If you checked the *Automatically open document* option, you can switch to Microsoft Word and skip the following four steps.

- ☐ Start Microsoft Word (or switch to it, if it is already running).
- ☐ Choose File, Open.
- ☐ Select the DICT_ED.RTF file from the MDF folder.

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[6] When you export an English diglot dictionary again later, Shoebox will ask you to confirm whether you want to replace the existing file. Choose Yes (Replace on the Macintosh), if you want to replace it.

☐ Choose Open (in Word for Windows 6, choose OK).

You can see that the dictionary has paragraph and character formatting. In the export step MDF converted the database markers to document styles. Style formatting is defined separately in a document template file. When you select *Audience: English*, the exported document uses the MDF_E.DOT template file to define its styles; when you select *National*, it uses MDF_N.DOT.

☐ Choose Tools, Finish exporting from Shoebox.

This runs the *FinishExportingFromShoebox* macro in the document template. It updates the document's styles from the template, takes care of a few specialized details beyond the capability of the general-purpose Shoebox Export, and saves the exported file as a Word Document. When you see a dialog box that says *Finished exporting from Shoebox*, your document is ready to print.

☐ Choose OK.

☐ Choose File, Print and OK (Print on the Macintosh).

You can see things on the printed page that might not have been apparent on the computer screen: there are two columns, there is a section heading above the entries for each letter of the alphabet, headers contain the first and last headword on the page, and footers contain the document's title.

Follow the steps for exporting and printing MDFSAMPL.DB again. This time select *Format: Reversed index (finderlist)*.

If you compare the records and fields (in the database) to the paragraphs and character-styled text elements (in the dictionary and finderlist documents), you'll begin to see what MDF does.

More about exporting

Knowing more about exporting will help you understand how to use options in MDF and Shoebox to print lexical data the way you want. The exporting step consists of three main sub-steps: selecting data (records and fields), sorting, and formatting.

Filtering records

If you select a filter in the *Multi-Dictionary Formatter* dialog box, MDF includes only the database records that match it. You can use filters to publish subsets of the lexicon as separate volumes focusing on topics such as plants, animals, or kin terms.[7]

Including and excluding fields

When you select *Audience* and *Format*, MDF includes fields that contain data in the appropriate languages. If you choose Options, you can include or exclude groups of fields using the check boxes. *Include example sentences* controls the **\rf, \xv, \xe, \xn,** and **\xr** fields. *Include notes* controls the **\na, \nd, \ng, \np, \nq, \ns,** and **\nt** fields. When national language fields are included, *Include regional with national* causes regional fields to be printed right after the corresponding national fields.

You can freely use non-MDF markers in your database, but MDF prints them only if you check *Include non-MDF fields*.

MDF selects which fields to use for lexeme, part of speech, definition, and reversal conditionally, according to each record's contents. The lexeme comes from the **\lc** field if there is one, otherwise from the **\lx** field. For a national audience, part of speech comes from **\pn** if present, otherwise **\ps**. Dictionary definitions come from **\de** if present, otherwise **\ge**. For an English audience, reversed index entries come from **\re** if present, otherwise **\ge**; for a national audience, from **\rn** if present, otherwise **\gn**.[8]

By default, MDF omits the **\dt, \ec, \es, \is, \re, \rn, \rr, \sd, \so, \st, \th, \we, \wn,** and **\wr** fields from dictionaries. To include any of these fields, or to exclude groups of fields not controlled by the standard options, choose Options, then Select Fields to be Excluded. Suppose you want to print example sentences without

[7] For more information about filters, look under "Basic features" in the Shoebox *Walkthrough*; for dictionary-making strategy, see §4.1 in *Making Dictionaries*.

[8] For more information, see §2.3 and §2.4 in *Making Dictionaries*.

their references. Then check *Include example sentences* but move the **\rf** marker to the *Excluded* list in the *Select Fields* dialog box.[9]

Sorting

Shoebox sorts the selected records and fields for MDF. It uses the default sort orders of these markers: **\lc** and **\hm** for dictionaries if *Sort by citation form* is checked, otherwise **\lx** and **\hm**; **\re** and **\ps** for English finderlists; **\rn**, **\ps**, and **\pn** for national finderlists. Because Shoebox gets the sort order indirectly via a marker rather than directly by a fixed language encoding name, you're free to change the names of your language encodings.

Remember that MDF selects each database record's lexeme and reversal fields conditionally. If you want entries to be sorted by the **\lx** field even when an **\lc** lexical citation field is present, choose Options and uncheck *Sort by citation form*.[10] If **\lx** and **\lc** have different language encodings (e.g. one is a non-Roman script and the other a Romanized transliteration), it doesn't make sense to sort by **\lc** unless every record has a citation form.

If you find entries out of order in a dictionary or finderlist, you should inspect the Shoebox *Sort Order Properties* dialog box.[11]

MDF divides the document into sections consisting of entries beginning with the same letter of the alphabet (or the same syllable, if the language is written using a syllabic script). MDF considers the sort order's primary sorting units to be the letters (or syllables). Therefore the lines in the *Primary characters* edit box determine the sections in dictionaries and finderlists.

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[9] Don't exclude the \lx, \hm, \lc, \se, \ps, \pn, or \sn fields! Note that *Excluded* fields in the *Select Fields* dialog box are omitted unconditionally, independent of the other field selection options. *Included* fields are printed conditionally, if none of the other options (e.g. *Audience*) exclude them.

[10] See §5.4.4 in *Making Dictionaries*.

[11] Suppose the national finderlist sorts wrong. Choose Database, Properties, select \rn from the list, choose Modify, choose Language Properties, select the language encoding's default sort order from the list, and choose Modify. For more information about sorting, choose Help in the *Sort Order Properties* dialog box. If you have the Shoebox 2 manual, see pp. 121-134 and 290-296.

Formatting

MDF arranges each record's data fields in a consistent, standard order in the formatted dictionary entry. This leaves you some flexibility in organizing your database records in Shoebox and keeps the printed dictionary consistent even when the database has minor inconsistencies. However, be aware that the relative order of the **\lx, \hm, \lc, \se, \ps, \pn,** and **\sn** fields is critical.[12]

When you select *Audience: National* and *Format: Triglot dictionary,* MDF prints national fields preceding the corresponding English ones in each group of related fields.

MDF merges multiple reversal entries with identical headwords.

The formatting step uses Consistent Change tables to transform the selected and sorted data. Their output is a temporary Standard Format file whose markers are converted to paragraph and character styles in the exported Rich Text Format file.[13]

The document's page footer contains the title (from the *Title in the footer* edit box) and date (if *Date in the footer* is checked under Options). Its header contains each page's first and last headwords (i.e. lexeme in a dictionary, reversal in a finderlist; if *Headwords in the header* is checked under Options).

Choose Page Setup to select the paper size and number of columns (on the Section tab—the default is two columns).

Formatting your data

Now that you have an overview of MDF and have seen a sample of what it does, you're ready to format your lexical data.

Copying MDF files

You need to copy several files from the MDF folder to the settings folder where Shoebox and MDF will expect to find them when

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[12] See §2.4 and Appendix B (which lists the markers in their printed order) in *Making Dictionaries*.

[13] The temporary file is based on the "MDF Rich Text Format" database type in the MDF_RTF.TYP file, since the CC tables output some special markers—for formatting only—which do not belong in your lexical database's type file.

you start working with your data.[14] Your *settings* folder is the one that contains your settings files: .PRJ project, .TYP database type, and .LNG language encoding files. If you choose to keep data and settings files together in the same folder, that's fine. If the Shoebox installation program copied the MDF files for you to your settings folder, then skip the following steps.

- ☐ Copy all of the .CCT Consistent Change table files.
- ☐ Copy the MDF_RTF.TYP database type file.
- ☐ If you're already using the MDF.TYP file that came with an earlier version of Shoebox, you can keep on using it. Make sure the *Multi-Dictionary Formatter* box on the *Options* tab of the *Database Type Properties* dialog box is checked.[15] If you're a first-time MDF user, copy either the MDF.TYP (for standard **\lx \se \ps \sn** marker hierarchy) or MDF_ALTH.TYP (for an alternate **\lx \sn \se \ps** hierarchy) database type file.
- ☐ Copy the .DOT document template files from the MDF folder either to your settings folder or to the folder where Microsoft Word keeps templates. If you copy them to Word's template folder, when you export the first time, choose Options, then Audience to locate the template files for MDF.

Note that this version of MDF is derived from the DOS version but does *not* use any of the same files.

Record template and marker for following field

Shoebox provides two ways for you to save time and improve quality when you input "bundles" of related fields, such as example sentences (**\rf**, **\xv**, **\xe**, **\xn**, **\xr**).

When you insert a new record in the lexical database, Shoebox uses the *record template* to initialize it. If you include the fields

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[14] The Shoebox installation package creates a "My Shoebox Settings" folder (MYSHSET in Windows 3.1) and in most cases copies these files here for you. This is the recommended place for your project and settings information.

[15] Also be sure to read the MDFNOTES.TXT file for more information on upgrading your files.

that every record should have in the template, you get complete, consistent structure in simple lexical entries automatically.

When you add a data "bundle" to an existing lexical record, Shoebox can insert the markers that follow the main marker. Suppose you use **\xv**, **\xe**, and **\xn** for example sentences.

- ☐ With your lexical database file open in Shoebox, choose Database, Properties.
- ☐ Select the **\xv** marker and choose Modify.
- ☐ Select *Marker for following field:* **\xe** and choose OK.
- ☐ Select the **\xe** marker and choose Modify.
- ☐ Select *Marker for following field:* **\xn** and choose OK.
- ☐ Choose OK.

Now when you add a second example sentence to a record (the first one's markers were inserted by the record template, right?), Shoebox inserts the **\xe** and **\xn** markers for you when you type Enter (return on the Macintosh) at the end of the preceding field.

If you're already using MDF and Shoebox for your lexicon, skip ahead to the section about "Customizing the format."

Starting or importing?

If you are starting a new lexical database, you need to understand the "Basic features" and "Starting a new project and database" sections in the Shoebox *Walkthrough*. Pay particular attention to information about database types and language encodings.

If you have lexical data on the computer, but you have not been using MDF, convert your data markers to MDF's set. If your file is not a Shoebox 4 database, import it.

Customizing the format

The Multi-Dictionary Formatter's default format has worked well for languages of Indonesia, where it was first developed. You can customize the format—titles, styles, and data field labels—to fit the languages and the publishing conventions for dictionaries wherever you are working.

Titles

You can choose a title for each of the six kinds of dictionary and finderlist documents. The title appears in the center of the footer at the bottom of each printed page.

- ☐ Start Shoebox (or switch to it, if it's already running).
- ☐ Open your database project and lexical database file.
- ☐ Choose File, Export.
- ☐ Select the *Multi-Dictionary Formatter* export process.
- ☐ Choose OK.
- ☐ Select *Audience: English* and *Format: Diglot dictionary*.
- ☐ Edit the contents of the *Title in the footer* box (or delete its contents, if you don't want a title in the document's footer).

Edit the titles for each of the other five combinations of *Audience* and *Format*. Notice that when you select *Audience: National* and click in the *Title* edit box, the font and keyboard are those you have defined in your national language encoding's properties.

- ☐ Choose OK, then Cancel.

Styles

MDF exports Standard Format markers in the database as styles in the dictionary and finderlist documents. Style formatting attributes are defined in document templates MDF_E.DOT (for *Audience: English*) and MDF_N.DOT (for *Audience: National*).

The following three sub-sections describe typical situations, in order of increasing complexity. When you have found the information for *your* situation, skip ahead to "Data field labels."

A different font

The lexical database's vernacular and national languages often have "special characters" that standard computer fonts lack. The simplest (and most common) situation is that you can get or build a single font that contains all the characters in the data, which you will use to print all the text in exported documents. You can easily select a different font than the default, because the styles in the document's template are based on the *Normal* style. Here's how.

- ☐ Start Microsoft Word (or switch to it, if it's already running).

- ☐ Choose File, Open.
- ☐ Select the copy of MDF_E.DOT in your data folder.
- ☐ Choose Open (in Word for Windows 6, choose OK).

The window is blank in Word because this template doesn't contain any text, only style definitions (and a macro).

- ☐ Choose Format, Style.
- ☐ Select *Normal* in the *Styles* list box.
- ☐ Choose Modify.
- ☐ Choose Format, Font.
- ☐ Select the appropriate font in the *Font* list box.
- ☐ Choose OK, OK, and Close.
- ☐ Choose File, Close and Yes that you want to save changes.

Do the same to your copy of the MDF_N.DOT template. These modified templates will give your exported documents the default MDF format, but in the appropriate font.

More than one font

In some cases there's no one font for all the languages in a lexicon, especially if any of them are written in non-Roman scripts. The document templates let you print different languages using different fonts. It is most efficient to select the font that serves the most languages for the *Normal* style, as already described. Though the templates contain almost as many character styles as there are MDF markers, the majority are based on a small subset. Here are the styles that you need to modify for the different languages:

vernacular: *vernacular, Letter (v)*

national: *national, Letter(n), Headword (n)*

English: *English, Letter (E), Headword (E)*

regional: *regional*

phonetic: *Phonetic form*

The *Letter* styles are for the letters of the alphabet in section headings. The *Headword* styles are for finderlists.

The "based on" relationship between character styles (in document templates) has the same purpose as the association between markers and language encodings (in database types). Please note that they are defined independently. Thus, for example, the base style for the document's vernacular text is still called *vernacular* even if you give the language encoding for the database's vernacular fields a different, more descriptive name.

Different style attributes

Publishing conventions for dictionaries in your area may require a different format—different style attributes, not just different fonts.

The document templates define line spacing attributes (indents, tabs, space before, etc.) in the paragraph styles.

The document's text elements are marked with character styles. Most of these styles, such as *Example (v)* for vernacular examples, have no attributes of their own, but are simply based on another style—in this case *vernacular*. If you don't want vernacular text to be bold, then you need only modify the *vernacular* style. You would modify the *Example (v)* style **only if** vernacular **examples** require distinctive formatting. An example of a style that does get distinctive formatting is *Part of speech*. Though an English field, its default MDF formatting is italic to distinguish it from other English fields, which are regular.

Here are the character styles that you are most likely to modify:

Style	Based on	Marker	Size	Etc.
Headword (E)			11	
Headword (n)			11	
Homonym number		**\hm**		Subscript
Letter (E)				Bold
Letter (n)				Bold

Letter (v)				Bold
Lexeme	vernacular	**\lx**	12	
national				Italic
Part of speech		**\ps**		Italic
regional				Italic
Scientific name		**\sc**		Italic, Underline
Subentry	vernacular	**\se**	11	
vernacular				Bold

Use the MDF_N.DOT template to account for format differences for the national audience. By default the only difference is that the italic attribute of the *English* and *national* styles is exchanged. That makes the second language regular, and the third language (of a triglot dictionary) italic, no matter which audience.

More about character styles

Knowing more about character styles in Microsoft Word document templates will help you understand how to get the printed format you want. If you only need to change fonts, or if you are an experienced Word user, you can skip ahead to "Data field labels."

- ☐ Start Microsoft Word (or switch to it, if it's already running).
- ☐ Open the sample DICT_ED.RTF English diglot dictionary file in the MDF folder (if it isn't already open).
- ☐ Click on the vernacular word **klwosu** in the first lexical entry.

If you have the *Style* drop-down list box showing on Word's toolbar, notice that the style is *Example (v)*.

- ☐ Choose Format, Style.

The *Styles* list box has *Example (v)* selected and *vernacular +* is its *Description*. (That means it is based on style *vernacular* and has no additional formatting of its own.)

☐ Choose Modify.

Notice *Style type: character* and *Based on: vernacular*.

☐ Choose Cancel, Cancel.

☐ Now click on the part of speech *disc* at the beginning of the first entry.

☐ Choose Format, Style.

☐ Choose Modify.

Notice *Style type: character, Based on: (underlying properties), Description: The font of the underlying paragraph style + Italic*.

Here are two things to notice in a style's description: to the left of the + is the style upon which it is based, and to the right is its individual formatting (if it has any). The character styles most likely to require modifications are based on *The font of the underlying paragraph style*, or have individual formatting, or both.

☐ Choose Format, Font.

Notice that all the controls are blank, except *Font Style: Italic*.

☐ Choose Cancel.

Notice the *Add to Template* check box at the bottom of the *Modify Style* dialog box. Both the document and its template contain a list of style definitions. If you have the **document file** open, and you modify a style, be sure to check this box before you choose OK. That means you want to modify the style's definition in the **template** too. If you forget this, you lose the style modifications the next time you export that document (because the file gets replaced). You can avoid the possibility of losing the changes the next time you export, by making all formatting changes in the templates, instead of in the documents.

☐ Choose Cancel, Cancel.

Printing the style definitions

If you need to make major modifications to a document template, you can print its style definitions before and after. Here's how:

- ☐ Start Microsoft Word (or switch to it, if it's already running).
- ☐ Open the MDF_E.DOT document template file in your data folder (if it isn't already open).
- ☐ Choose File, Print.
- ☐ Select *Print What: Styles*.
- ☐ Choose OK (on the Macintosh, choose Print).

Data field labels

Markers distinguish the different kinds of data fields in a Shoebox record. MDF uses labels to distinguish many of the data fields in a dictionary entry (except fields like headword, part of speech, and sense number, whose position and formatting are distinctive). For example, MDF labels **\cf** Cross-reference fields *See:* in English, *Cf.:* in French, *Siehe:* in German, *Lihatlah:* in Indonesian, and *Ver:* in Spanish.

MDF uses a Consistent Change table to translate labels for the national audience. To select the appropriate change table, choose Options, then Audience. The default is MDF_INZ.CCT (Indonesian). Look at the files named MDF_*.CCT in your settings folder to see what languages are available for labels. Here's how to translate labels into a different language.[16]

- ☐ Make a copy of the MDF_ENG.CCT change table.
- ☐ Use a text editor to open the new file.
- ☐ Search for: group(gLabel)

A few lines below that you will see change rules like:
"See:" > "See:" c \cf Cross-reference

[16] Please send your translated labels to the address listed in the Shoebox Help About dialog box so that we can include them in the next version.

- ☐ Replace the labels on the right-hand side of the > wedge with translated equivalents. It's important that you leave the quotes around the labels intact when you edit them.
- ☐ Exit the editor and save the changes.

If you need to modify MDF's default labels for an English audience, you can edit MDF_ENG.CCT.

Range set labels

Three fields which contain user-defined data that may need to be translated or modified for printing are **\lf** Lexical function, **\pdl** Paradigm label, and **\ps** Part of speech. We'll call these data items *range set labels*, because they have a limited set of values that you are encouraged to define in Shoebox as *Range Sets*. The method described above also lets you translate or modify range set labels.

Suppose you want the lexical function label *Ant* for antonym to be printed as *Antón:* for a Spanish audience.

- ☐ Use an ordinary text editor to open MDF_SPN.CCT.
- ☐ Search for: group(gLexicalFunctionLabel)
- ☐ Add the line: "Ant:" > "Antón:" c Antonym
- ☐ Exit the editor and save the changes.

Suppose you want to print the paradigm label *pl* for irregular plural forms as *Pl:* for an English audience via MDF_ENG.CCT.

- ☐ Search for: group(gParadigmLabel)
- ☐ Add the line: "pl:" > "Pl:' c Plural

Suppose you want to print French part of speech abbreviations but don't have explicit **\pn** fields in all your lexical database records.[17]

- ☐ With your lexical database file open in Shoebox, choose Database, Properties, select the **\ps** marker, choose Modify, then Range Set.

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[17] While it is valid—even desirable—to use part of speech labels familiar to the English or national audience, remember that the categories themselves link meaning and grammar in the vernacular. See §9 in *Making Dictionaries*.

- ☐ If you're not sure whether the range set is complete, choose Build Range Set. Keep this dialog box open.
- ☐ Use an ordinary text editor to open MDF_FRN.CCT.
- ☐ Search for: group(gPartOfSpeech)
- ☐ For each element in the range set, e.g. *n*, add a line like:
  "n" > "nom" c noun > nom
- ☐ Exit the editor and save the changes.